



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,171	10/22/2001	Elizabeth Cates	5235	1594

7590 08/22/2006

Milliken & Company
P.O. Box 1927
Spartanburg, SC 29304

EXAMINER

SHEWAREGED, BETELHEM

ART UNIT PAPER NUMBER

1774

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,171

Applicant(s)

CATES ET AL.

Examiner

Betelhem Shewareged

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-28 is/are pending in the application.
- 4a) Of the above claim(s) 4-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 23-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response filed on 06/14/2006 has been fully considered. The claim objection and the 35 USC 103 rejection have been withdrawn in view of Applicant's amendment and comments.
2. Claim 3 is amended, and claims 1 and 3-28 are pending. (NOTE: Claims 4-22 are withdrawn from consideration as non-elected invention).

New Rejections

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1 and 23-25 are rejected under 35 U.S.C. 102(a) as being anticipated by Kawasaki et al. (US 6,338,891 B1).
5. Kawasaki discloses an ink jet recording sheet comprising a support and an ink receiving layer on the support (abstract). The ink receiving layer comprises a fluorocarbon resin type repellant in an amount of 0.05-10% by weight (col. 6, lines 42-57), a cationic material such as cationic surfactant (col. 6, line 20-35), and a binder such as polyvinyl acetate, methyl methacrylate-butadiene copolymer and ethylene-vinyl acetate copolymer (col. 5, lines 42-55). The binder is equivalent to the claimed sorbant. The support comprises nonwoven fabric or cloth (col. 7, line 33).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3 and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasaki et al. (US 6,338,891 B1) in view of Anderson et al. (US 6,096,469) and Wang et al. (US 5,908,663).

8. Kawasaki discloses an ink jet recording sheet comprising a support and an ink receiving layer on the support (abstract). The ink receiving layer comprises a fluorocarbon resin type repellant in an amount of 0.05-10% by weight (col. 6, lines 42-57), a cationic material such as a fixer for ink dye (col. 6, line 38), and a binder such as polyvinyl acetate, methyl methacrylate-butadiene copolymer and ethylene-vinyl acetate copolymer (col. 5, lines 42-55). The binder is equivalent to the claimed sorbant. The support comprises nonwoven fabric or cloth (col. 7, line 33).

9. With respect to the amount of the binder (sorbant) in the ink receiving layer, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the amount of the binder in order to optimize the strength of the layer and optimize the ink absorption of the layer (col. 6, line 5-7). A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable,

Art Unit: 1774

which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

10. Kawasaki does not teach the claimed water soluble metal salt as the fixer, i.e., the cationic material.

11. Anderson teaches an ink receptor media comprising a substrate and an ink receptor on the substrate (abstract). The ink receptor comprises a water soluble multivalent metal salt as an ink fixing agent (col. 9, lines 54-67), and examples of the metal salt are disclosed in col. 10, lines 7-25.

12. Kawasaki and Anderson are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the water soluble multivalent metal salt ink fixing agent of Anderson with the invention of Kawasaki to rapidly destabilize dispersants surrounding the pigment particles in the ink, whereby the pigment particles coagulate or flocculate as the remainder of the ink fluid continues along the surfaces of the receptor medium (col. 10, line 65).

13. Kawasaki does not teach perfluorocarbon repellant.

14. Wang teaches a carpet treated with a solution comprising inorganic additives and organic additives (abstract). The organic additive comprises fluorochemical repellant containing perfluorinated carbon chain (col. 7, line 59 thru col. 8, line 49).

15. Kawasaki and Wang are analogous art because they are from the same field of endeavor that is the fabric art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the perfluorocarbon containing

Art Unit: 1774

repellant of Wang with the invention of Kawasaki to impart repellency to the fibrous substrate (col. 7, lines 61).

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B.S.
August 17, 2006.


BETELHEM SHEWAREGED
PRIMARY EXAMINER